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CLAIMS

1. A device for cooling and calibrating plastic profiles, comprising
  - a housing (13) having an entry opening and an exit opening for the profile (8) to be processed; and
  - a sleeve (12) disposed within the housing, which connects the entry opening and the exit opening and encloses a passage (24) essentially corresponding to the outer contour of the profile (8) and containing the profile (8) to be guided, said sleeve completely surrounding the profile inside the device; and
  - a vacuum system for generating a vacuum in the gap between profile (8) and sleeve (12), which is connected to small openings (14, 15) provided in the sleeve (12); and
  - at least one interior space (25), which is filled with a cooling medium during operation of the device and is provided with an inflow opening (17) and an outflow opening (18) for the cooling medium such that a flow of the cooling medium can be generated in the interior space (25);

**characterized in that** the sleeve (12) is furnished with at least one thin-walled section separating the passage (24) from the interior space (25), and that openings (14, 15) are positioned in this section which connect the passage (24) and the interior space (25).

2. A device according to claim 1, **characterized in that** the openings (14, 15) are at least partly configured as bores (15), with a diameter of less than 1.0 mm, and preferably between 0.5 and 0.7 mm.
3. A device according to claim 1 or 2, **characterized in that** the openings (14, 15) are at least partly configured as slits (14), whose width is less than 1.0 mm, and preferably about 0.7 mm.

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4. A device according to any of claims 1 to 3, **characterized in that** the sleeve (12) has a thickness of less than 6%, and preferably less than 3%, of the diameter of the profile (8) to be processed.
5. A device according to any of claims 1 to 4, **characterized in that** the sleeve (12), in addition to the openings (14, 15), is provided with at least one air feeder opening which communicates with an air chamber.
6. A device according to claim 5, **characterized in that** the air feeder opening is connected to the air chamber via an air feeder line in which is disposed a control valve.
7. A device according to any of claims 1 to 6, **characterized in that** flow guiding elements are provided in the interior space (25).
8. A device according to any of claims 1 to 7, **characterized in that** the housing (13) and the sleeve (12) consist of a plurality of parts and can be disassembled during operation.
9. A device according to claim 8, **characterized in that** centering means are provided for accurate alignment of the individual parts.
10. A device according to any of claims 1 to 9, **characterized in that** a plurality of housings (13) are positioned on a common ground plate one behind the other and aligned in longitudinal direction.
11. A device according to any of claims 1 to 10, **characterized in that** the outflow opening (18) is connected to a self-priming water pump in order to create the low pressure in the interior space.
12. A device according to any of claims 1 to 11, **characterized in that** the openings (14, 15) are located primarily in areas corresponding to the visible areas of the profile (8).

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13. A device according to any of claims 1 to 12, **characterized in that** the openings are configured at least partly as slits (14a) on the interior wall of the sleeve (12), which communicate with the outside of the sleeve (12) via bores (15a).